



Conference Announcement and Call for papers

ULIS 2009



10th International Conference on ULtimate Integration of Silicon



March 18-20, 2009 - Aachen, Germany



hosted by *Forschungszentrum Jülich*
sponsored by *IEEE Electron Device Society*

www.ulisconference.org

Conference Objectives

The aim of the ULIS Conference is to provide an open forum for the presentation and discussion of recent research in technology, physics, modeling, simulation and characterization of advanced nanoscale silicon and silicon compatible devices in the More Moore, More than Moore and Beyond CMOS domains.

Scientific Programme

Topics for original contributions to be submitted to the ULIS 2009 Conference include, but are not limited to:

- Nanometer scale devices: physics, technology, characterization techniques and evaluation metrics for high performance, low power, low standby power, high frequency and memory applications.
- CMOS scaling perspectives; device / circuit level performance evaluation; switches and memory scaling.
- New channel materials for CMOS electronics: strained Si, strained SOI, SiGe, GOI, III-V and high mobility materials for MOSFET; carbon based electronics; carbon nanotubes; graphene based devices.
- Thin gate dielectrics: first and second generation high-k materials for switches and memory.
- Alternative transistor architectures including PDSOI, FDSOI, DGSOI, FinFETs, MuGFETs, vertical MOSFET, IMOS and tunnel FET structures. Benchmarking of new architectures w.r.t. bulk CMOS.
- One dimensional and zero dimensional structures: nanowires, nanotubes, nanodots. Nanowire and nanotube based interconnects; nanocrystal based NVM memory cells.
- Variability and fluctuation phenomena in electronic switches and memory devices. Single electron, few electron, discrete dopant and discrete charge effects in scaled electron devices.
- Advanced physics based modeling and simulation of nanoscale switches and memory. First principle and ab-initio modeling of devices, materials and interfaces for CMOS.
- Quasi ballistic, ballistic and quantum transport in nanoscale devices. Compact modeling of nanoscale devices. Modeling and management of thermal effects. Benchmarking of modeling approaches.
- Process characterization through device parameter extraction, device and electrical characterization of nanometer scale technologies.
- CMOS compatible molecular and quantum devices; non conventional nanodevices for sensors, actuators and bioelectronics. NanoCMOS to bio- and opto- interfaces.

Invited speakers

Six distinguished invited speakers from America, Asia and Europe will open the sessions of the two-day conference program reporting on recent advances in nanoelectronics and visions of the future.

Satellite events: Tutorial session

A tutorial session will be organized on March 18, 2009, prior to the conference, in collaboration with the Training Program of the NanoSIL project. At the tutorial, worldwide recognized experts will provide to researchers and engineers an introduction to the newest developments in technology, modelling and characterization of nanodevices.

Papers

The ULIS 2009 program will consist of six distinguished invited presentations, contributed oral presentations and poster sessions on topics of high relevance in the field of advanced Si-based or Si-compatible nanoelectronic devices. Papers must be submitted electronically in the final form using PDF-Express compliant format. Accepted papers will be published in the **Conference Proceedings and on IEEExplore**. A limited number of the best papers presented at the conference will be selected and the authors will be encouraged to submit an extended version for a special reviewed issue of **Solid State Electronics**. Please consult: www.ulisconference.org for updated information on the submission procedure.

The deadline for the electronic submission of the camera ready paper is January 23, 2009.

Registration and accommodation

Information about registration and hotel reservations will be available on the Conference website. Room blocks at reduced prices will be available for the participants to the conference and tutorials.

Technical Programme Committee

- F. Balestra, IMEP Minatec, Grenoble, France
- N. Collaert, IMEC, Leuven, Belgium
- G. Doornbos, NXP Semiconductors, Belgium
- T. Ernst, CEA LETI, Grenoble, France
- C. Fiegna, ARCES-DEIS, Univ. of Bologna, Italy
- G. Ghibaudo, IMEP Minatec, Grenoble, France
- M. Lemme, AMO GmbH, Aachen, Germany
- S. Mantl, Forschungszentrum Juelich, Germany
- F. Payet, ST Microelectronics, Crolles, France
- S. Roy, University of Glasgow, Glasgow, UK
- L. Selmi, DIEGM, University of Udine, Udine, Italy

Steering Committee

- S. Deleonibus, CEA-LETI Grenoble, France
- K. De Meyer, IMEC, Leuven, Belgium
- M. Haond, ST Microelectronics, Crolles, France
- Y. Ponomarev, NXP Semic., The Netherlands,
- E. Sangiorgi, ARCES-DEIS, Univ. of Bologna, Italy
- L. Risch, Qimonda, Dresden, Germany

Local Organizing Committee

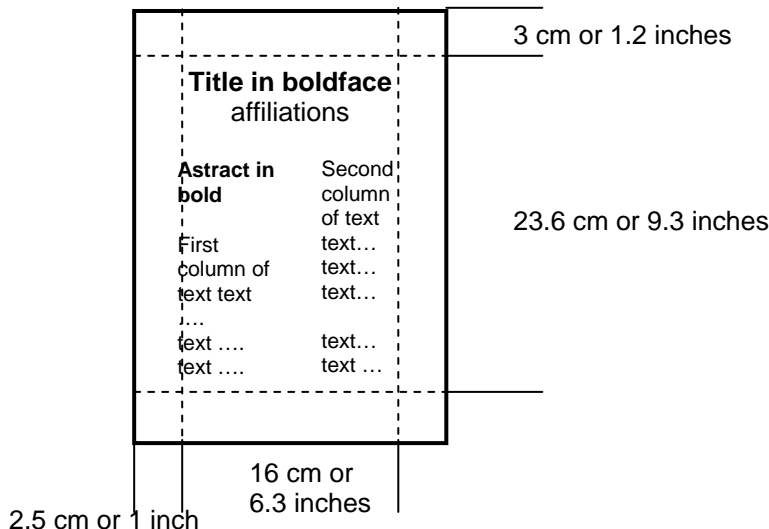
Siegfried Mantl, Max Lemme (Conference chairs)

Location and Venue

Aachen is located in the Western region of Germany, directly at the border triangle of Germany, Netherlands and Belgium. It is well served by the Cologne, Düsseldorf and Frankfurt airports as well as the airports Brussels in Belgium and Maastricht in the Netherlands. The ULIS 2009 Conference and Tutorial session will be held at RWTH Aachen University (Karman-Auditorium, Room Fo3) located in the historic heart of Charlemagne's imperial city center with its renowned cathedral, city hall and its famous thermal baths.

Preparation of the camera-ready paper

The paper should be four pages. The text area should be 23.6 x 16 cm (9.23 x 6.3 inches) in double column format. The top margin should be 3 cm (1.2 inches); the left margin should be 2.5 cm (1 inch) for both A4 (29.7x21 cm) and US Letter (11 x 8.6 inches) pages.



Reply form – ULIS 2009 - March 18-20, 2009

Please fax this form to

ULIS 2009, Aachen, Germany, fax: +49-2461-61-4673

Family Name:.....First Name.....Initials.....

Affiliation:

Mailing address:.....

E-mail/Phone/FAX:

Please tick the appropriate box(es):

I plan to attend the Tutorial session

I plan to attend the Conference

I plan to submit a paper in the field: